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Federal Communications Commission  
Office of the Secretary

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WASHINGTON, D.C. 20036

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(202) 785-2800

August 22, 1990

ORIGINAL

Ms. Donna R. Searcy  
Secretary  
Federal Communications Commission  
1919 M Street, N.W.  
Washington, D.C. 20554

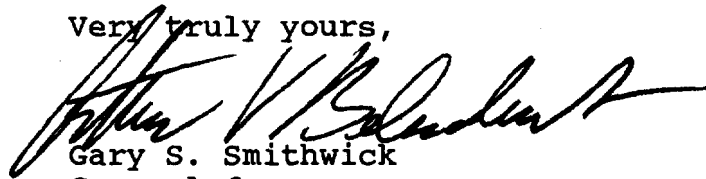
RE: Bible Broadcasting Network, Inc.  
Conway, Florida  
File No. BPED-890412MJ

Dear Ms. Searcy:

Transmitted herewith, on behalf of Bible Broadcasting Network, Inc., applicant for a construction permit for a new FM station at Conway, Florida (File No. BPED-890412MJ), are an original and four copies of a "Petition for Leave to Amend" and accompanying amendment to the above-referenced application.

If there are any questions with respect to this matter, please communicate with the undersigned.

Very truly yours,



Gary S. Smithwick  
Counsel for

BIBLE BROADCASTING NETWORK, INC

GSS/pn  
Enc.

cc: As per Certificate of Service  
Conway Public File  
Bible Broadcasting Network, Inc.

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AUG 23 1990

FM EXAMINERS

Before the  
**Federal Communications Commission**  
Washington, D.C. 20554

RECEIVED

AUG 22 1990

Federal Communications Commission  
Office of the Secretary

In re Application of )  
 )  
BIBLE BROADCASTING NETWORK, INC. ) File No. BPED-890412MJ  
Conway, Florida )  
 )  
For Construction Permit )  
For a New FM Station )  
on Channel 202C2 )

TO: Chief, Mass Media Bureau

**PETITION FOR LEAVE TO AMEND**

Bible Broadcasting Network, Inc. ("BBN"), by its attorneys, and pursuant to Section 73.3522 of the Commission's Rules, hereby respectfully petitions the Commission for leave to amend its application (File No. BPED-880930MM) to change the transmitter site. In support whereof, the following is shown.

BBN is an applicant for a construction permit for a new non-commercial educational FM station at Conway, Florida. Its application was filed on April 12, 1989. BBN's proposed station is located within the affected radius of WCPX-TV, a television station operating on Channel 6 at Orlando, Florida. Therefore, BBN was required to comply with Section 73.3525 of the Commission's Rules with respect to minimizing interference to Channel 6. The rules recognize that the best solution to Channel 6/FM interference is co-location of the transmitters of the FM station with the television station. BBN attempted to reach an agreement with WCPX-TV to co-locate on its tower. On February 17, 1989, WCPX-TV

provided a letter to BBN (Attachment A) in which it stated that it was unable to accommodate BBN's request for space on its tower.

However, WCPX-TV had no objection to location of the BBN antenna on a tower located approximately 2.95 kilometers from the WCPX-TV transmitter, so long as BBN agreed to cooperate and resolve all interference problems caused by the new station. BBN duly filed its application proposing to use the tower which had been coordinated with WCPX-TV.

On July 25, 1990, Florida Public Radio, Inc. ("FPR"), filed a Petition to Dismiss or Deny, inter alia, BBN's application. This set into motion a chain of events which has resulted in BBN obtaining permission to co-locate on the WCPX-TV tower. After receipt of the FPR Petition, BBN counsel spoke with counsel for one of the opposing applicant's and learned, for the first time, that WCPX-TV had granted permission to one of the applicant's to diplex the 88.3 MHz carrier on the WCPX-TV Channel 6 antenna. Counsel alerted BBN principals who spoke with Robert K. Diehl, Chief Engineer for WCPX-TV. On August 9, 1990, Mr. Diehl provided BBN with a letter (Attachment B) which indicates that should BBN be awarded the license, WCPX-TV is willing to work toward an agreement with BBN to diplex on the WCPX-TV antenna. The costs of the diplexer and all engineering work would have to be borne by BBN, and subsequent details of a lease agreement worked out with

respect to specific details. In addition, BBN would have to assure WCPX-TV that any BBN induced signal problems would be resolved to BBN's and WCPX-TV's mutual satisfaction. BBN is willing to comply with WCPX-TV's conditions.

Accordingly, BBN has prepared and is filing today the attached amendment (Attachment C) to its application.

Good cause exists for the acceptance of this amendment, although it is being presented after the last day for filing amendments as of right. The Commission encourages the co-location of Channel 6/FM facilities. The amendment even meets the stringent post-hearing designation test set forth in Erwin O'Conner Broadcasting Co., 22 FCC 2d 140, 143 (Rev. Bd. 1987). That is: (a) it was presented with due diligence, less than thirty days after BBN received permission from WCPX-TV to co-locate on WCPX-TV's antenna; (b) it is involuntary in that BBN did not learn of the opportunity to use the WCPX-TV antenna until after the FPR Petition was filed (on the last day for amendments as of right); (c) no new parties or issues are required; (d) no disruption of this proceeding will occur; (e) no party will be prejudiced; and (f) no comparative advantage will accrue to BBN.

WHEREFORE, good cause having been shown, BBN respectfully requests the Commission to permit it to amend its application to change its transmitter site.

Respectfully submitted,

BIBLE BROADCASTING NETWORK, INC.

By:   
 for

Gary S. Smithwick  
Its Attorney

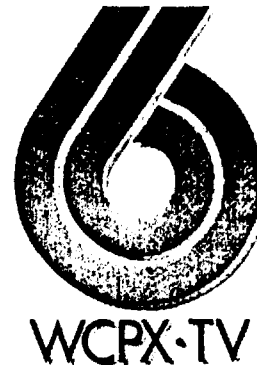
SMITHWICK & BELENDIUK, P.C.  
2033 M Street, N.W., Suite 207  
Washington, D.C. 20036  
(202) 785-2800

August 22, 1990

**ATTACHMENT A**

February 17, 1989

Mr. Lowell Davey, President  
Bible Broadcasting Network  
1300 Battlefield Blvd.  
Chesapeake, VA 23320



Dear Mr. Davey,

As we discussed a few days ago, TV Tower, Inc. is unable to accommodate your request for space on it's tower located at Bithlo, FL. Collocation on this tower would serve both WCPX, Ch6 in protecting it's aural carrier and allow you a spot in an overcrowded spectrum. It is unfortunate that this plan could not work out, but as we both know, there are many other factors that enter into determining such a decision.

WCPX has no objection to your location on the Gannet Tower, located approximately one and one quarter miles for the WCPX transmitter Bithlo location as long as you cooperate and resolve and all interference problems caused by your new station. Your carrier of 88.3Mhz is very close to WCPX's 87.74 aural carrier. However FM filters on the antenna terminals of TV receivers that are experiencing interference do seem to do a very good job of eliminating the problem.

As long as you assure me that you will be faithful in addressing all TVI problems that your station causes, WCPX has no objections to your going on the air as proposed, and will be more than happy to work with you. I wish you best of luck with your license application.

Best regards,

*Robert K. Diehl*  
Robert K. Diehl  
Chief Engineer

copy; Michael J. Schweitzer, G.M., file

**ATTACHMENT B**



August 9, 1990

Mr. Lowell L. Davey  
President, Bible Broadcasting Network  
Box 1818  
Chesapeake, VA 23320



Dear Mr. Davey,

As we discussed yesterday, August 8th, WCPX and Central Florida Educational Foundation, Inc, have had discussions about their diplexing the 88.3MHz carrier on the WCPX Channel 6 antenna, should they receive the 88.3 allocation. No formal contract has been signed, since at the present time they don't hold the license.

Should Bible Broadcasting be awarded the license, WCPX is willing to work toward an agreement with Bible Broadcasting to diplex on the WCPX antenna. The price of the diplexer and all Engineering work would have to be born by Bible Broadcasting and subsequent details of an agreement worked out as to annual lease with all miscellaneous details. In addition Bible Broadcasting would have to assure WCPX that any Bible Broadcasting induced signal problems would be solved to our mutual satisfaction.

The existing WCPX antenna is an RCA IEF-6MB(S) located 1460 feet above average terrain. The coordinates are 28 deg. 36' 08" North by 81 deg. 05' 37" West.

Best of luck to you in your license acquisition.

Respectfully,

*Robert K. Diehl*  
Robert K. Diehl  
Chief Engineer

copy; Michael J. Schweitzer, General Manager WCPX-TV  
file

**ATTACHMENT C**

Before the  
**Federal Communications Commission**  
Washington, D.C. 20554

RECEIVED

AUG 22 1990

Federal Communications Commission  
Office of the Secretary

In the Matter of  
Application of

BIBLE BROADCASTING NETWORK, INC.  
Conway, Florida

For Construction Permit  
for a New FM Station  
on Channel 202C2  
Conway, Florida

File No. BPED-890412MJ

**AMENDMENT**

The above-referenced application of Bible Broadcasting Network, Inc. ("BBN"), applicant for a construction permit for a new FM station at Conway, Florida, is amended by substituting the attached (a) Section V-B of FCC Form 340, and related exhibits; and (b) Transmitter Site Certification Form, for the corresponding pages already on file.

Executed this 20<sup>th</sup> day of August, 1990.

Respectfully submitted,

BIBLE BROADCASTING NETWORK, INC.

By: 

Lowell Davey  
President

Section V-B - FM BROADCAST ENGINEERING DATA

FOR COMMISSION USE ONLY

File No. \_\_\_\_\_

ASB Referral Date \_\_\_\_\_

Referred by \_\_\_\_\_

Name of Applicant **Bible Broadcasting Network**

Call letters (if issued)

Is this application being filed in response to a window? ☐ Yes ☒ No

If Yes, specify closing date: \_\_\_\_\_

Purpose of Application: (check appropriate boxes)

☒ Construct a new (main) facility

☐ Construct a new auxiliary facility

☐ Modify existing construction permit for main facility

☐ Modify existing construction permit for auxiliary facility

☐ Modify licensed main facility

☐ Modify licensed auxiliary facility

If purpose is to modify, indicate below the nature of change(s) and specify the file number(s) of the authorizations affected.

☐ Antenna supporting-structure height

☐ Effective radiated power

☐ Antenna height above average terrain

☐ Frequency

☐ Antenna location

☐ Class

☐ Main Studio location

☐ Other (Summarize briefly)

File Number(s) \_\_\_\_\_

1. Allocation:

Channel No.	Principal community to be served:		
	City	County	State
202	Conway	Orange	FL

Class (check only one box below)

☐ A ☐ B1 ☐ B ☐ C3  
☒ C2 ☐ C1 ☐ C ☐ D

2. Exact location of antenna. 0.72 km N. of St.Rd.420, E. of Lake Pickett, Bithlo, Orange Co., FL

(a) Specify address, city, county and state. If no address, specify distance and bearing relative to the nearest town or landmark.

(b) Geographical coordinates (to nearest second). If mounted on element of an AM array, specify coordinates of center of array. Otherwise, specify tower location. Specify South Latitude or East Longitude where applicable; otherwise, North Latitude or West Longitude will be presumed.

Latitude	28	36	08	Longitude	81	05	37
----------	----	----	----	-----------	----	----	----

3. Is the supporting structure the same as that of another station(s) or proposed in another pending application(s)?

☒ Yes ☐ No

If Yes, give call letter(s) or file number(s) or both.

WCPX, WMFE, WWKA, WDI Z, WFTV (TV) WMFE-FM

If proposal involves a change in height of an existing structure, specify existing height above ground level including antenna, all other appurtenances, and lighting, if any.

DNA

## SECTION V-B - FM BROADCAST ENGINEERING DATA (Page 2)

4. Does the application propose to correct previous site coordinates?  
If Yes, list old coordinates.

☐ Yes ☒ No

Latitude	0	Longitude	0
----------	---	-----------	---

5. Has the FAA been notified of the proposed construction?  
If Yes, give date and office where notice was filed and attach as an Exhibit a copy of FAA determination, if available.

☒ Yes ☐ No

Exhibit No.

Date 8-16-90 Office where filed Southern Region

6. List all landing areas within 8 km of antenna site. Specify distance and bearing from structure to nearest point of the nearest runway.

NONE

Landing Area

Distance (km)

Bearing (degrees True)

(a) \_\_\_\_\_  
(b) \_\_\_\_\_

7. (a) Elevation: *(to the nearest meter)*

(1) of site above mean sea level;

20 meters

(2) of the top of supporting structure above ground (including antenna, all other appurtenances, and lighting, if any); and

490 meters

(3) of the top of supporting structure above mean sea level  $[(aX1) + (aX2)]$

510 meters

- (b) Height of radiation center: *(to the nearest meter)* H = Horizontal; V = Vertical

(1) above ground

438 meters (H)

--- meters (V)

(2) above mean sea level  $[(aX1) + (bX1)]$

458 meters (H)

--- meters (V)

(3) above average terrain

448 meters (H)

--- meters (V)

8. Attach as an Exhibit sketch(es) of the supporting structure, labelling all elevations required in Question 7 above, except item 7(bX3). If mounted on an AM directional-array element, specify heights and orientations of all array towers, as well as location of FM radiator.

Exhibit No.  
E-3

9. Effective Radiated Power:

(a) ERP in the horizontal plane

1.9 kw (H) --- kw (V)

(b) Is beam tilt proposed?

☐ Yes ☒ No

If Yes, specify maximum ERP in the plane of the tilted beam, and attach as an Exhibit a vertical elevational plot of radiated field.

Exhibit No.  
DNA

--- kw (H) --- kw (V)

\*Polarization

10. Is a directional antenna proposed?

☒ Yes ☐ No

If Yes, attach as an Exhibit a statement with all data specified in 47 C.F.R. Section 73.316, including plot(s) and tabulations of horizontally and vertically polarized radiated components in terms of relative field.

Exhibit No.  
E-4

11. Will the main studio be located within the 70 dBu or 3.16 mV/m contour?

☒ Yes ☐ No

If No, attach as an Exhibit justification pursuant to 47 C.F.R. Section 73.1125.

Exhibit No.

12. Are there: (a) within 60 meters of the proposed antenna, any proposed or authorized FM or TV transmitters, or any nonbroadcast *(except citizens band or amateur)* radio stations; or (b) within the blanketing contour, any established commercial or government receiving stations, cable head-end facilities, or populated areas; or (c) within ten (10) kilometers of the proposed antenna, any proposed or authorized FM or TV transmitters which may produce receiver-induced intermodulation interference?

☒ Yes ☐ No

If Yes, attach as an Exhibit a description of any expected, undesired effects of operations and remedial steps to be pursued if necessary, and a statement accepting full responsibility for the elimination of any objectionable interference (including that caused by receiver-induced or other types of modulation) to facilities in existence or authorized or to radio receivers in use prior to grant of this application. *(See 47 C.F.R. Sections 73.315(b), 73.316(d) and 73.318.)*

Exhibit No.  
A

13. Attach as an Exhibit a 7.5 minute series U.S. Geological Survey topographic quadrangle map that shows clearly, legibly, and accurately, the location of the proposed transmitting antenna. This map must comply with the requirements set forth in Instruction D for Section V. Further, the map must clearly and legibly display the original printed contour lines and data as well as latitude and longitude markings, and must bear a scale of distance in kilometers.

Exhibit No.  
E-5

14. Attach as an Exhibit *(name the source)* a map which shows clearly, legibly, and accurately, and with the original printed latitude and longitude markings and a scale of distance in kilometers:

Exhibit No.  
E-1

(a) the proposed transmitter location, and the radials along with profile graphs have been prepared;

(b) the 1 mV/m predicted contour and, for noncommercial educational applicants applying on a commercial channel, the 3.16 mV/m contour; and

(c) the legal boundaries of the principal community to be served.

15. Specify area in square kilometers (1 sq. mi. = 2.59 sq. km.) and population (latest census) within the predicted 1 mV/m contour.

Area 4,816 sq. km.Population 698,195 (1980 Census)  
698,054 (1980 Corr. Census)

16. Attach as an Exhibit a map *(Sectional Aeronautical charts where obtainable)* showing the present and proposed 1 mV/m (60 dbu) contours.

Exhibit No.  
E-1A

Enter the following from Exhibit above:

Gain Area	$1008 \text{ km}^2$	<u>389</u>	sq. mi.
Loss Area	$8 \text{ km}^2$	<u>3.1</u>	sq. mi.

Percent change (gain area plus loss area as percentage of present area) 26.7 %

If 50% or more this constitutes a major change. Indicate in question 2(c), Section I, accordingly.

17. For an application involving an auxiliary facility only, attach as an Exhibit a map (*Sectional Aeronautical Chart or equivalent*) that shows clearly, legibly, and accurately, and with latitude and longitude markings and a scale of distance in kilometers:

Exhibit No. DNA
--------------------

(a) the proposed auxiliary 1 mV/m contour; and

(b) the 1 mV/m contour of the licensed main facility for which the applied-for facility will be auxiliary. Also specify the file number of the license. See 47 C.F.R. Section 73.1675. (File No.: \_\_\_\_\_)

18. Terrain and coverage data (*to be calculated in accordance with 47 C.F.R. Section 73.313*).

Source of terrain data: (*check only one box below*)

☒ Linearly interpolated 30-second database ☐ 7.5 minute topographic map

(Source: NGDC-TPG-0050)

☐ Other (*briefly summarize*)

Radial bearing (degrees True)	Height of radiation center above average elevation of radial from 3 to 16 km (meters)	Predicted Distances to the 1-mV/m-contour (kilometers)
0	451	40.5
45	455	42.5
90	455	41.0
135	447	40.1
180	443	37.6
225	442	39.8
270	445	43.2
315	449	41.0

#### Allocation Studies

(See Subpart C of 47 C.F.R. Part 73)

19. Is the proposed antenna location within 320 kilometers (199 miles) of the common border between the United States and Mexico?

☐ Yes ☒ No

If Yes, attach as an Exhibit a showing of compliance with all provisions of the Agreement between the United States of America and the United Mexican States concerning Frequency Modulation Broadcasting in the 88 to 108 MHz band.

Exhibit No. DNA
--------------------

20. Is the proposed antenna location within 320 kilometers of the common border between the United States and Canada?

☐ Yes ☒ No

If Yes, attach as an Exhibit a showing of compliance with all provisions of the Working Agreement for Allocation of FM Broadcasting Stations on Channels 201-300 under The Canada-United States FM Agreement of 1947.

Exhibit No.  
DNA

21. If the proposed operation is for a channel in the range from channel 201 through 220 (88.1 through 91.9 MHz), or if this proposed operation is for a class D station in the range from Channel 221 through 300 (92.1 through 107.9 MHz), attach as an Exhibit a complete allocation study to establish the lack of prohibited overlap of contours with other U.S. stations. The allocation study should include the following:

Exhibit No.  
E-6

- (a) The normally protected interference-free and the interfering contours for the proposed operation along all azimuths.
- (b) Complete normally protected interference-free contours of all other proposals and existing stations to which objectionable interference would be caused.
- (c) Interfering contours over pertinent arcs of all other proposals and existing stations from which objectionable interference would be received.
- (d) Normally protected and interfering contours over pertinent arcs, of all other proposals and existing stations, which require study to show the absence of objectionable interference.
- (e) Plot of the transmitter location of each station or proposal requiring investigation, with identifying call letters, file numbers and operating or proposed facilities.
- (f) When necessary to show more detail, an additional allocation study will be attached utilizing a map with a larger scale to clearly show interference or absence thereof.
- (g) A scale of kilometers and properly labeled longitude and latitude lines, shown across the entire Exhibit(s). Sufficient lines should be shown so that the location of the sites may be verified.
- (h) The name of the map(s) used in the Exhibit(s).

22. With regard to any stations separated by 53 or 54 channels (10.6 or 10.8 MHz) attach as an Exhibit information required in 1/ *(separation requirements involving intermediate frequency (i.f.) interference).*

Exhibit No.  
E-6

23.(a) Is the proposed operation on Channel 218, 219, or 220?

☐ Yes ☒ No

(b) If the answer to (a) is yes, does the proposed operation satisfy the requirements of 47 C.F.R. Section 73.207?

☐ Yes ☐ No

(c) If the answer to (b) is yes, attach as an Exhibit information required in 1/ regarding separation requirements with respect to stations on Channels 221, 222 and 223.

Exhibit No.  
DNA

(d) If the answer to (b) is no, attach as an Exhibit a statement describing the short spacing(s) and how it or they arose.

Exhibit No.  
DNA

1/ A showing that the proposed operation meets the minimum distance separation requirements. Include existing stations, proposed stations, and cities which appear in the Table of Allotments; the location and geographic coordinates of each antenna, proposed antenna or reference point, as appropriate; and distance to each from proposed antenna location.



SECTION V-B - FM BROADCAST ENGINEERING DATA (Page 6)

- (e) If authorization pursuant to 47 C.F.R. Section 73.215 is requested, attach as an Exhibit a complete engineering study to establish the lack of prohibited overlap of contours involving affected stations. The engineering study must include the following:

Exhibit No.  
DNA

- (1) Protected and interfering contours, in all directions (360°), for the proposed operation.
- (2) Protected and interfering contours, over pertinent arcs, of all short-spaced assignments, applications and allotments, including a plot showing each transmitter location, with identifying call letters or file numbers, and indication of whether facility is operating or proposed. For vacant allotments, use the reference coordinates as transmitter location.
- (3) When necessary to show more detail, an additional allocation study utilizing a map with a larger scale to clearly show prohibited overlap will not occur.
- (4) A scale of kilometers and properly labeled longitude and latitude lines, shown across the entire exhibit(s). Sufficient lines should be shown so that the location of the sites may be verified.
- (5) The official title(s) of the map(s) used in the exhibits(s).

24. Is the proposed station for a channel in the range from Channel 201 to 220 (88.1 through 91.9 MHz) and the proposed antenna location within the distance to an affected TV Channel 6 station(s) as defined in 47 C.F.R. Section 73.525?

☒ Yes ☐ No

If Yes, attach as an Exhibit either a TV Channel 6 agreement letter dated and signed by both parties or a map and an engineering statement with calculations demonstrating compliance with 47 C.F.R. Section 73.525 for each affected TV Channel 6 station.

Exhibit No.  
E-7

25. Is the proposed station for a channel in the range from Channel 221 to 300 (92.1-107.9 MHz)?

☐ Yes ☒ No

If Yes, attach as an Exhibit information required in 1/. (Except for Class D (secondary) proposals.)

Exhibit No.

26. Environmental Statement (See 47 C.F.R. Section 1.1307 et seq.)

Would a Commission grant of this application come within Section 1.1307 of the FCC Rules, such that it may have a significant environmental impact?

☐ Yes ☒ No

If you answer Yes, submit as an Exhibit an Environmental Assessment required by Section 1.1311.


Exhibit No.

If No, explain briefly why not.

This application meets the requirements of OST Bulletin No. 65 and is categorically excluded from environmental processing pursuant to Section 1.1306 of the Commission's Rules; specifically, because it does not (1) involve a site location specified under Section 1.1307(a) (1)-(5); (2) involve high intensity lighting under Section 1.1307(a) (6); or, (3) result in human exposure to radio frequency radiation in excess of the applicable safety standards specified in Section 1.1307(b) of the Commission's Rules.

CERTIFICATION

I certify that I have prepared this Section of this application on behalf of the applicant, and that after such preparation, I have examined the foregoing and found it to be accurate and true to the best of my knowledge and belief.

Name (Typed or Printed) E. Harold Munn, Jr.	Relationship to Applicant (e.g., Consulting Engineer) Technical Consultant
Signature 	Address (Include ZIP Code) Box 220 Coldwater, MI 49036
Date August 17, 1990-	Telephone No. (Include Area Code) (517) 278-7339

FILED  
F. A. M. M.  
100

# **ENGINEERING REPORT**

**NEW FM BROADCAST STATION**

**at**

**CONWAY, FLORIDA**

**AMENDMENT of BPED-890412MJ**

**August, 1990**

**PREPARED BY:**

**E. HAROLD MUNN, JR. &  
ASSOCIATES, INC.**

**ONE HUNDRED AIRPORT ROAD**

**COLDWATER, MICHIGAN**

**(517) 278-7339**

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CERTIFICATION OF CONSULTANT

The firm of E. Harold Munn, Jr. & Associates, Inc., Broadcast Engineering Consultants, with offices at 100 Airport Drive, Coldwater, Michigan, has been retained for the purpose of preparing the technical data forming this report.

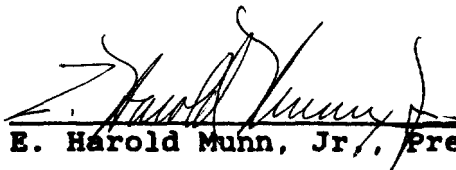
The report has been prepared by properly trained electronics specialists under the direction of the undersigned whose qualifications are a matter of record before the Federal Communications Commission.

I declare under penalty of perjury that the contents of this report are true and accurate to the best of my knowledge and belief.

E. HAROLD MUNN, JR. & ASSOCIATES, INC.

August 17, 1990

By

  
E. Harold Munn, Jr., President

100 Airport Drive, Box 220  
Coldwater, Michigan 49036

(517) 278-7339

## DISCUSSION

This firm was retained to prepare the required engineering report in support of an application for a new Educational FM Broadcast Station serving the area of Conway, Florida.

It has been determined that FM Channel 202, 88.3 MHz, may be used in the vicinity, meeting the requirements of the rules concerning no overlap with existing facilities, as specified in 47 C.F.R.73.509.

The data concerning the allocation for use at Conway is found in Exhibit E-6 of this report. The data in that exhibit includes a tabulation of the spacing to existing facilities, and a map showing the fact that there will be no overlap to or from those facilities. This application is mutually exclusive with several other applications which propose the use of Channel 202 at Conway and certain other communities, and with a proposal for the use of Channel 203A at Mims, Florida.

The facility, as proposed in this application, will provide 1.0 mV/m service to the entire community of license. The 1.0 mV/m contour has been calculated, and the data is tabulated in Exhibit E-6, and plotted as Exhibit E-1.

This application is a modification of BPED-890412MJ. As such, a comparison of the previous application area with this proposal has been made. This comparison is shown as Exhibit E-1A. The "gain" plus "loss" area created by this application for modification has been calculated, and is 26.7% of the area within the previous 1.0 mV/m contour. Thus, this modification is a minor change from BPED-890412MJ.<sub>1</sub>

The proposed use of Channel 202 at Conway is within the affected radius of WCPX, Channel 6, Orlando, Florida. Therefore, the applicant has obtained permission to diplex the Channel 202 FM signal into the WCPX transmission line and use the WCPX antenna to radiate the FM signal. This is a not uncommon practice, first used by this firm between WICR(FM), and WRTV, Channel 6, Indianapolis, Indiana. The use of the WCPX antenna means the best compliance with 73.525 of the Rules concerning protection for Channel 6 television stations.

There will be no change in the overall height of the existing tower which supports the WCPX antenna and several other broadcast facilities. No FAA notification is required for the structure. However, the FAA has been notified of the addition of this low power FM signal to the tower.

This proposal is classified as a C2 facility, as the distance to the 1 mV/m (60 dBu) contour is between 39 and 52 km, at the reference ERP of 1.9 kW, and the antenna height above average terrain of 448 m.

---

1-In the gain-loss study, those portions of the 1 mV/m contour over large bodies of water were deducted. Examples are Mosquito Lagoon, and the wide sections of the Indian River between Titusville and Merritt Island.

As there are several high power sources of RF energy presently operating from this structure, the fields have been evaluated in accordance with the provisions of OST Bulletin No.65, to determine the effect of the addition of the FM station on Channel 202, 88.3 MHz.

In accordance with Sec.4.1 of Appendix A of OST Bulletin No.65, the individual limit fractions have been determined, and the results added. The sum of the individual limits does not exceed unity, thus, the facilities as operating, and proposed, are in full compliance with the rules of the Commission.

The results are tabulated as follows. In all cases, the peak field was used in the calculations including the effect of ground reflections. The calculations indicated that the maximum fields would be experienced about 100 meters from the base of the tower. In all cases, the peak field for each station as calculated was the field employed in the study tabulation.

<u>STATION</u>	<u>FIELD</u>	<u>DECIMAL PORTION OF UNITY</u>
WCPX(TV)	0.0012 mW/cm <sup>2</sup>	0.0012
WFTV(TV)	0.0023	0.0023
WMFE(TV)	0.017	0.0096
WMFE(FM)	0.008	0.0080
WDIZ(FM)	0.0028	0.0028
WWKA(FM)	0.0020	<u>0.0020</u>
Total EXISTING.0259		
PROP.FM Less		
Ch.202 than 0.001		<u>0.001</u>

Total EXISTING plus:0.0269

A "worst case" study was also made, assuming the rated powers of the stations all radiated downward, with no correction for antenna vertical patterns.

WCPX(TV)	0.0175 mW/cm <sup>2</sup>	0.0175
WFTV(TV)	0.0484	0.0484
WMFE(TV)	0.3075	0.1737
WMFE(FM)	0.1500	0.1500
WDIZ(FM)	0.0545	0.0545
WWKA(FM)	0.0386	0.0386
Ch.202 Prop.(FM)	0.0003	<u>0.0003</u>

Worst Case Total: 0.4830

Thus, full compliance with the guidelines concerning human exposure to radiofrequency radiation is attained.

### METHODOLOGY FOR FM RADIATION STUDY

The EPA has developed a computer model which serves as a general means of estimating the power densities in the vicinity of typical FM broadcast stations. As is typical of such models, this frequently results in a "worst case" type of determination, as contrasted with lesser amounts of radiation which may actually be determined to exist by taking of field strength measurements. The EPA model considers the following variable factors:

- (1) Effective radiated power
- (2) Radiation center height above ground
- (3) Polarization of the transmitted signal
- (4) Type of antenna (generic)
- (5) Number of sections (elements or bays) in the array

This particular model is discussed by Gailey and Tell in EPA Report No. 520/6-85-011, April, 1985.

This model makes use of the element and array pattern product and takes into account ground reflections. It is considered to be a reasonable approach for determining the upper bounds of field intensity near transmitting towers on which FM facilities are located.

Calculations are normally made at 2 meters above the ground. Total ERP is used--adding of the vertical and horizontal components. The FCC's OST Report No. 65 provides tables listing the estimates of antenna heights required for compliance with "worst case" situations. (See Table 1.) Reasonable predictions may be made from use of those data. More specific calculations are made by computer, extrapolating the basic data, and providing a printout graphical presentation of the data.

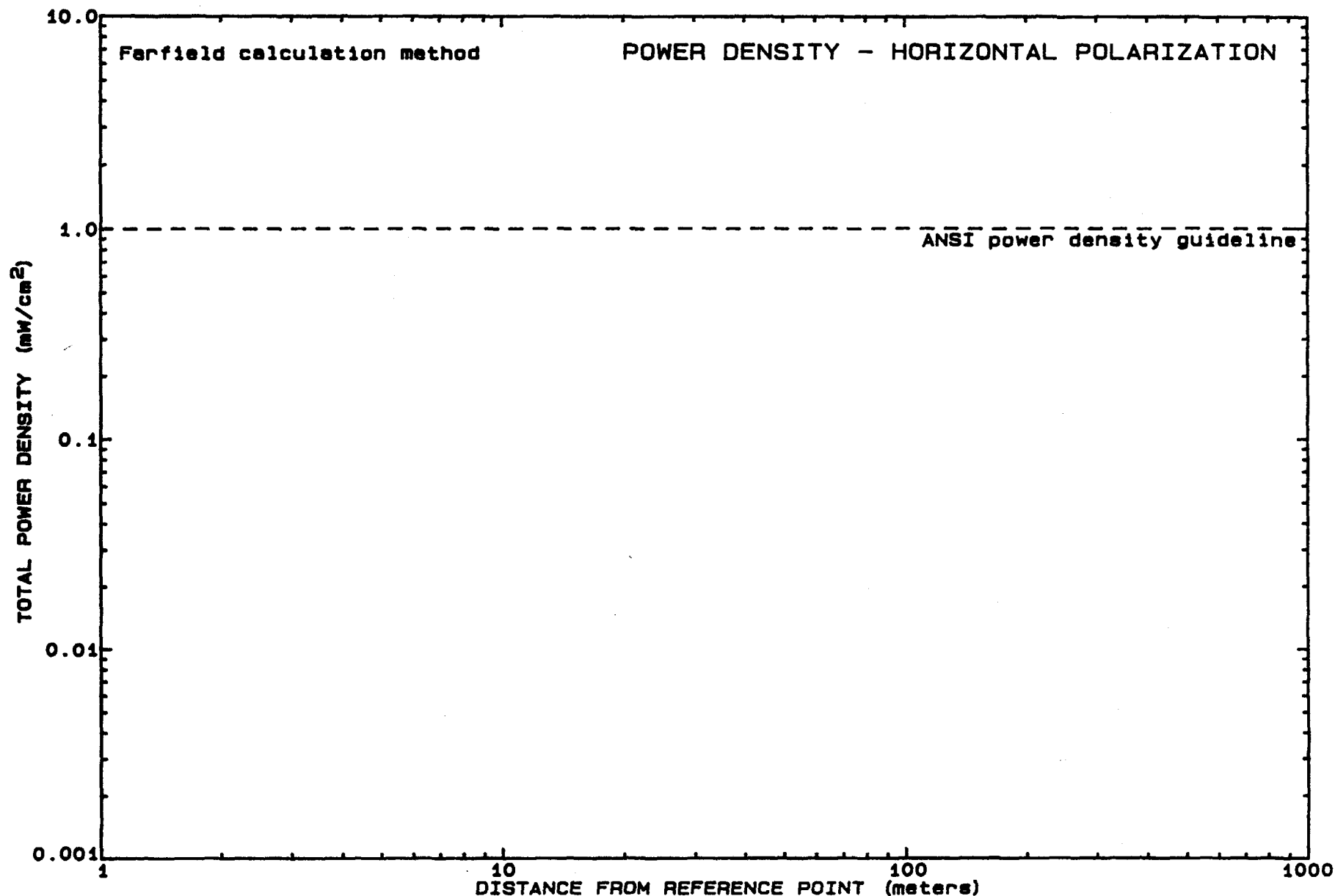
In the case of joint use of a tower by TV and FM stations, the fractional contributions are summed. If the sum of all such fractional contributions is less than unity (1.0), it is concluded that there is no problem of exceeding the ANSI guidelines.

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#### References:

1. P. C. Gailey & R. A. Tell. "An Engineering Assessment of the Potential Impact of Federal Radiation Protection Guidance on the AM, FM and TV Broadcast Services," U. S. Environmental Protection Agency, April, 1985.
2. Federal Communications Commission, OST Bulletin No. 65, "Evaluating Compliance with FCC-Specified Guidelines for Evaluating Human Exposure to Radiofrequency Radiation," by Robert F. Cleveland, October, 1985.
3. Kraus, J. D. "Antennas," McGraw-Edison Book Co., NYC, 1950

Station: BIBLE      Frequency: 88.300 MHz      Height of Observer (ARP): 2.0 Meters  
 Horizontal Polarization:      No. of Elements      Element Type      Height of Center (ARP)      Power (ERPd)  
    6      EPA TYPE 1      438.0 m      1.900 kW





Station: WWKA      Frequency: 92.300 MHz      Height of Observer (ARP): 2.0 Meters  

	No. of Elements	Element Type	Height of Center (ARP)	Power (ERPd)
Horizontal Polarization:	10	EPA TYPE 3	418.0 m	100.000 kW
Vertical Polarization:	10	EPA TYPE 3	418.0 m	100.000 kW

